



Central Bank of Nigeria's Bank Verification Number Policy and its Effect on Deposit Money Banks' Customers; Empirical Evidence from Nigeria

Adeniyi Clement Olaiya
Department of Banking and Finance,
The Federal Polytechnic, Ado Ekiti,
Ekiti State, Nigeria

Oludayo Elijah Adekunle*
Department of Banking and Finance,
Adekunle Ajasin University Akungba-Akoko,
Ondo State, Nigeria

Abstract: The need to protect customers' data and ensure confidence in the banking system has resulted in the initiation of diverse efforts to improve the security system of commercial banks. The security threat associated with the conventional security system of password and personal identification numbers led to Bank Verification Numbers (BVN) by commercial banks in Nigeria. This study thus investigated the effect of BVNs on the protection of customers of commercial banks in Nigeria. A self-administered questionnaire was collected from 150 respondents based on a purposive random sampling technique. The data collected were analyzed using the descriptive statistic technique of simple percentage, frequency, and chi-square. It was found that BVN was significant and effective in protecting commercial banks customer through the protection of transaction, bank account and boosting customers' confidence in the banking system. It was further established that BVN through their biometric security and the anti-fraud system help prevent fraud, impersonation, and security breaches on customers' accounts. This study implies that a BVN is an efficient tool in protecting customers' data in the banking system. BVN mechanisms put in place to ensure the protection of consumers is effective in strengthening banks' security systems and protecting customers' information and funds. This study's novelty lies in investigating BVNs on the protection of commercial banks customers. Studies have not been conducted in the subject area because BVN is a recent innovation in the Nigerian banking sector.

Keywords: BVN, biometric, commercial banks, customer protection, regulatory authority

Received: 14 April 2021; **Accepted:** 28 June 2021; **Published:** 13 August 2021

INTRODUCTION

Commercial banks render diverse financial services to meet the needs of different customers. Before the introduction of technology, bank services were rendered manually, with little attention given to the issue of security. However, the introduction and adoption of technology in the banking sector brought security in protecting customers' data (Bolton et al., 2018; Siyal, Donghong, Umrani, Siyal, & Bhand, 2019).

BVN is a recent idea introduced by banks' regulators to tighten the security level in the banking sector. BVN is a unique number given to customers across banks to protect fraud and ease banking transactions (Craven & Eloff, 2010; Schiavi & Behr, 2018). Opeyemi, Gbenga, Metfula, and Opeoluwa (2017) asserted that it was introduced in 2014 by the Central Bank of Nigeria to protect against the high rate of money laundry and fraud in the banking system. The

*Correspondence concerning this article should be addressed to Oludayo Elijah Adekunle, Department of Banking and Finance, Adekunle Ajasin University Akungba-Akoko, Ondo State, Nigeria. E-mail: adekunleoludayo864@yahoo.com

need for BVN resulted from the inefficiency associated with the initial conventional security systems of password and Personal Identification Number (PIN) of customers (Kolapo, Ache, & Abbah, 2015).

BVN is also believed to have the capacity to guide against weak lending policies of banks and the high rate of scams associated with traditional bank protection methods. According to Joseph, McClure, and Joseph (1999); Olijó (2018), BVN also forms an important scheme of the monetary authority to promote cashless policy, ensure sanity in the banking sector and promote quick transaction to achieve the vision 2020 of the nation. Commercial banks are in charge of customers' details and must ensure that they are safe. The need to protect customers' information results from the fact that banks are obligated to ensure due diligence in treating their customers and may be liable in case of negligence and threat (Hope, 2014; Maji, 2019).

The incessant frauds perpetrated against banks' customers in Nigeria have been a challenge to commercial banks and regulatory authorities. In 2014 when the BVN was initiated, the case of fraud in the banking sector stood at 2,661, with N3.11 billion lost to fraud (Olijó, 2018). Also, in 2015, 3,657 cases of fraud were recorded. The frauds carried out during the period are related to miscellaneous frauds, illegal withdrawals from the automated teller machines, computer frauds, suppression of cash, and forged cheques with forged signatures (Agwu, 2014; Bamidele, 2015; Bizer & DeMarzo, 1992; Nnachi et al., 2020; Kaothan, 2018; Olatunji, Adekola, & Isaac, 2014; Owolabi, 2010). Özkan, Bindusara, and Hackney (2010) asserted that the issues of threat security and management of customers data had been big challenges in Nigeria and other developing canines when compared to nations like Germany, China, Urinated State of America and Australia amongst others.

These cases of frauds being committed in the banking sector have continued to undermine commercial banks' efforts in protecting customers and instilling confidence in the system. Bank's customers are always complaining of illegal withdrawal and transfer in their account and other forms of unlawful access to customers' details. This challenges commercial banks and regulatory authorities (Abiola & Adedokun, 2013; Tade, 2021; Temitope, 2014). However, studies on BVNs are still emerging in Nigeria because it is a recent initiative initiated by the Central Bank of Nigeria. Also, studies that were conducted mainly focus on the mode of design of BVN and how BVN prevents fraudulent activities in the baking sector. There are few studies in this area, and no study investigated the effects of BVNs on customers' protection in Nigeria. Thus, the objective of this study is to examine the effect of BVNs on customers' protection in Nigeria. The specific objective is to investigate the effects of BVNs on customers' transactions, accounts, and confidence in Nigeria. Besides the current introductory part, the paper was sectionalized into the literature review, methodology, discussion of empirical findings, and conclusion.

LITERATURE REVIEW

BVN is an advance technology method that gives unique security codes to each bank customer to ensure the tightening of security in the banking system. BVN was launched in 2014 by the Central Bank of Nigeria to ensure that customers' data are adequately protected and further advance the Know Your Customer (KYC) initiative (Akyuz, Tony, & Opusunju, 2019). BVN is a biometric process that produces 11 numbers following the verification of customers' data and capturing their picture, fingerprints, and signature for inclusion in the database of banks (Taiwo, 2015). BVN aims to ensure that customers' information is protected and curb the high rate of corruption prevalent in the banking system (Taiwo, 2015).

The protection of customers' data has been one of the major responsibilities of commercial banks. Customers are important stakeholders in the banking system, and without them, there will not be a need for commercial banks. Banks render diverse services such as deposits acceptance, cash withdrawals, transfer of funds, online transactions, loan granting, and honoring the cheque to customers (Jan & Abdullah, 2014; Okoye, Omankhanlen, OKOH, Ezeji, & Achugamonu, 2019). These services enable commercial banks to cover costs and make a profit.

However, before the adoption of technology, services were rendered to customers manually. During this period, little attention was given to security issues, especially regarding customers' data with banks (Cheng, Lam, & Yeung, 2006; Zhu, Li, Li, & Amirteimoori, 2020). Nevertheless, following the need to improve services and meet the high needs of customers, commercial banks have adopted different technologies (Bamidele, 2015; Gupta & Mehta, 2021). As a result, different security issues have threatened the safety of customers' data and cash in Nigeria. Different frauds have been perpetrated with customers' losing huge cash. These have affected the integrity and sanity of the banking system. Thus, efforts have been made by banks and regulatory authorities to protect customers against fraud.

Wisdom (2015) investigated the effect of BVN on corrupt business practices in Zenith Bank Nigeria Plc by sampling

selected Zenith Bank Nigeria Plc staff. Regression technique was employed for analysis, and it was found that BVN had a significant effect on corrupt prevention. [Odusina and Fowosire \(2014\)](#) evaluated how information communication technology and BVN prevented fraud in the Nigerian banking system by collecting data from workers and customers of banks. The study revealed that BNV, with information communication technology's aid, effectively reduces incessant fraud in the banking system. In the study of [Esoimeme \(2015\)](#), the ability of BVN to achieve the intended objective of theft reduction was analyzed, and it was established that BNV could achieve objective of reducing banking theft and fraud. [Fadayo \(2018\)](#) focused on the factors that aid electronic banking fraud in Nigeria. Both descriptive and inferential techniques used for analysis indicated that ineffective banking operations, internal control issues, and lack of customer awareness resulted in electronic banking fraud in Nigeria.

[Olijo \(2018\)](#) employed content analysis to explore newspapers coverage of BVN in Nigeria by focusing on The Daily Sun and The Leadership newspaper, and it was found that the newspapers effectively covered the issues of BVN in Nigeria. [Akyuz et al. \(2019\)](#) evaluated the effect of BVN on corruption in Abuja. Data were collected from 246 staff of United Bank for Africa through a questionnaire and analyzed with multiple regression. It was revealed in the study that BVN had a positive and significant effect on corrupt business practices. [Nnachi et al. \(2020\)](#) studied the effect of BVN on fraud management in Ebonyi state. Primary data were collected through questionnaires from 35 staff-selected commercial banks and analyzed using descriptive statistics. It was found that BVN had a direct relationship with theft and safety reduction.

The reviewed studies found that empirical study on BVNs is emerging and has attracted the attention of scholars in Nigeria ([Akyuz et al., 2019](#); [Esoimeme, 2015](#); [Nnachi et al., 2020](#); [Odusina & Fowosire, 2014](#); [Wisdom, 2015](#)). However, most of the reviewed studies focused on the efficacy of BVN in preventing corrupt practices of employees and fraud in the banking system. Also, [Fadayo \(2018\)](#) studied the factors that led to electronic banking fraud, while [Olijo \(2018\)](#) studied the level of coverage of BVN issues in newspapers. However, none of the reviewed studies investigated the effect of BVN on customers' protection which is the major gap that this study intended to fill. Study of this nature are necessary given the recent spike in security issues relating to customers' accounts and the threat posed to the banking sector.

METHODOLOGY

This study is mainly quantitative and employed a survey research design to investigate the effect of BVN on customers' protection in Nigeria. It relied on the primary method of data collection through the use of a self-administered questionnaire.

The questionnaire employed is a self-design questionnaire based on 15 item questions designed to uncover the perception of respondents on the effect of BVNs on customers' satisfaction. The questionnaire is a closed-ended and five-point Likert scale design of strongly agreed, agreed, undecided, disagreed, and strongly disagreed. The population comprises commercial banks customers who were randomly and purposively selected based on their level of experience with a BVN. 200 respondents were randomly sampled and were made to fill the questionnaire, from which 150 copies were properly filled and retrieved. The questionnaires were administered through an online survey wherein the questionnaires were sent to the personal mail of respondents and retrieved via the Google survey retrieval process. Following the data retrieval, the data were sorted and recoded into Statistical Package for Social Sciences to aid analysis. The data for the study were analyzed using descriptive statistics and chi-square. The respondents' demographic information was analyzed with simple percentages and frequency. Finally, the research questions were analyzed with percentage, frequency, and chi-square.

EMPIRICAL RESULTS

This section presents results on data collected from the respondents using descriptive statistics and chi-square techniques. Analysis of demographic information and responses to the research questions are presented and concluded by discussing findings.

Table 1 DEMOGRAPHIC INFORMATION

Items		Frequency	Percentage
Gender	Male	91	60.7
	Female	59	39.3
	Total	150	100.0
Account Operated	Savings	97	64.7
	Current	47	31.3
	Fixed Deposit	6	4.0
	Total	150	100.0
Education Background	SSCE	16	10.7
	OND/ NCE	19	12.7
	HND	25	16.7
	BSC	83	55.3
	MSC/ PHD	7	4.7
	Total	150	100.0
Registration of BVN	Yes	130	86.7
	No	20	13.3
	Total	150	100.0

Source: Result from Field Survey, 2020

Table 1 presents the demographic information of the respondents who are selected banks customers selected randomly. The gender distribution of the respondents shows that 60.7% of the respondents were males while 39.3% were female, which implies that the study is gender-biased. Also, based on the types of account operated by the respondents, the result reveals that 64.7% of the respondents are operating savings account, 31.3% are operating current account, while 4% of the respondents are operating fixed deposit account.

The respondent's qualification distribution shows that 10.7% of the respondents have obtained Senior Secondary School Certificate, 12.7% have obtained either National Diploma or National Certificate Education, 16.7% have Higher National Diploma, 55.3% of the respondents have Bachelor of Science Certificate, and finally, 7(4.7%) of the respondents have obtained Masters or Doctorate Certificate. Finally, the result shows that 86.7% of the sampled respondents have enrolled and duly registered for BVNs, while 13.3% have not yet registered for BVNs. Thus, it is concluded that the study's findings are valid because most of the respondents know BVNs.

Table 2 BVN AND BANK CUSTOMERS' TRANSACTION

S/N	Influence Factors	SA	A	U	D	SD
1	Does BVN reduce illegal banking transactions?	96 (64%)	52 (34.7%)	-	1 (7%)	1 (7%)
2	Does BVN help in ensuring the safety of depositors' funds?	83 (55.3%)	60 (40%)	1 (7%)	1 (7%)	5 (3.3%)
3	Does BVN enhance the efficient delivery of bank transactions?	86 (57.3%)	46 (30.7%)	4 (2.7%)	3 (2%)	11 (7.3%)
4	Do you think that BVN protects your transactions with banks?	105 (70%)	41 (27.3%)	3 (2%)	-	1 (7%)
5	Does BVN enable the bank to track transactions across all banks in Nigeria with more ease?	80 (53.3%)	68 (45.3%)	1 (7%)	-	1 (7%)
Chi-square = 53.067		Df = 4	Asymp. Sig = 0.000			

Source: Result from Field Survey, 2020

Table 2 presents results on the influence of BVNs in protecting customers' transactions. In item 1, most of the respondents believe that BVN reduces illegal banking transactions. Also, in item 2, it is revealed that a larger percentage of the respondents accepted that BVN helps ensure the safety of the depositor's fund. Furthermore, in item 3, the majority of the respondents consented that BVNs enhance the efficient delivery of bank transactions.

The result in item 4 indicates that most respondents concurred that BVNs protect their transactions with banks. Finally, the result in item 5 depicts that a good number of the respondents believe that BVNs make it easy for banks to track transactions across all banks in Nigeria with more ease. Thus, it is concluded that BVN helps in the protection of customers' transaction. This is achieved by preventing illegal transactions, the safety of funds, and the effective delivery of services. BVN helps banks monitor and control customers' transactions at ease through the issue of unique number. In Table 2, the chi-square result shows a value of 53.067 with a corresponding asymptotic significance of 0.000, which is significant at 5% (i.e., $0.000 < 0.05$). Therefore, it is concluded that BVN has a significant effect on customers' transaction.

Table 3 *BVN AND BANK CUSTOMERS ACCOUNT*

S/N	Influence Factors	SA	A	U	D	SD
1	Does BVN protect the customer's bank account from unauthorized access?	84 (56%)	56 (37.3%)	2 (1.3%)	2 (1.3%)	6 (4%)
2	Does BVN reduce reported cases of scam, fraud and account impersonation?	89 (59.3%)	53 (35.3%)	3 (2%)	3 (2%)	2 (1.3%)
3	Does BVN assist commercial banks in keeping authentic records of their customers?	86 (57.3%)	51 (34%)	6 (4%)	1 (7%)	6 (4%)
4	Does BVN minimize money laundering?	83 (55.3%)	43 (28.7%)	13 (8.7%)	3 (2%)	8 (5.3%)
5	Do you think that BVN ensures accountability and improves security on bank accounts?	99 (66%)	32 (21.3%)	4 (4.7%)	2 (1.3%)	10 (6.7%)
Chi-square = 68.320		Df = 4		Asymp. Sig = 0.000		

Source: Result from Field Survey, 2020

Table 3 reveals findings on the effect of BVNs on bank customers' accounts. The result in item 1 shows that the majority of the sampled population accepts that BVNs protect customers' bank accounts from unauthorized access. In item 2, it is indicated that a larger percentage of the respondents agree that bank verification reduces reported cases of scam, fraud, and account impersonation. Furthermore, item 3 reveals that most of the respondents agreed that BVN assists commercial banks in keeping authentic records of their customers.

Item 4 depicts that a larger percentage of the respondents agree with the option that BVN minimizes money laundering. Finally, under item 5, most of the sampled population accepted that BVN ensures accountability and improve security on bank accounts. Therefore, it is concluded that BVN assists in the protection of customers' bank account. The accounts of customers are protected through the improvement of security, which helps in reducing/eliminating money laundry, scam, fraud, and impersonation that may be carried out on this account. In addition, through BVNs, commercial banks can keep authentic records of their customers and prevent unauthorized access to customers' accounts through security improvement. Table 3 further shows that, the value is chi-square 68.320 with a corresponding asymptotic significance of 0.000 which is significant at 5% (i.e., $0.000 < 0.05$). Therefore, it is concluded that BVN has a significant effect on customers' account.

Table 4 *BVN AND BANK CUSTOMERS' CONFIDENCE*

S/N	Influence Factors	SA	A	U	D	SD
1	Does the BVN scheme have positive effects on bank customers' confidence?	107 (71.3%)	40 (26.7%)	1 (7%)	1 (7%)	1 (7%)
2	Does BVN protect bank customers, including the illiterate person in the banking system?	76 (50.7%)	60 (40%)	2 (1.3%)	5 (3.3%)	7 (4.7%)
3	Does BVN provide a special anti-fraud system that ensures customer confidence?	98 (65.3%)	29 (19.3%)	7 (4.7%)	-	16 (10.7%)
4	Does biometric means of BVN more effective in reducing customer complaints (especially relating to PIN issues)?	40 (26.7%)	64 (42.7%)	7 (4.7%)	8 (5.3%)	31 (20.7%)
5	Is overall customer satisfaction better achieved through the biometric BVN?	72 (48%)	48 (32%)	14 (9.3%)	3 (2%)	13 (8.7%)
Chi-square = 26.680		Df = 4		Asymp. Sig = 0.000		

Source: Result from field survey, 2020

Table 4 presents results from a field survey on the influence of BVNs on bank customers' confidence. Item 1 indicates that a larger percentage of the selected respondents concurred that BVN schemes positively affect bank customers' confidence. Furthermore, the result in item 2 shows that most of the respondents are in concord protect bank customers, including illiterate people in the banking system. Also, item 3 reveals that a good number of sampled respondents accepted that BVNs provide a special anti-fraud system that ensures customer confidence.

In addition, item 4 reveals that larger numbers of the respondents believe that biometric means of BVN is more effective in reducing customer complaints. Finally, item 5 shows that nearly all the respondents acknowledged that overall customer satisfaction is better achieved through the biometric BVN. Hence, it is concluded that bank verification is significant in enhancing customers' confidence in the banking system. BVN promotes customers' confidence in the system by providing a special anti-fraud system and biometric means of BVN, which helps reduce breaches of security and customer complaints. This helps in increasing sanity in the banking system, thereby boosting customers' confidence. Table 4 further shows that, the value is chi-square 26.680 with a corresponding asymptotic significance of 0.000 which is significant at 5% (i.e., $0.000 < 0.05$). Therefore, it is concluded that BVN has a significant effect on customers' confidence.

DISCUSSION OF FINDINGS

This study investigated the effect of BVNs on customers' protection in Nigeria. The study revealed that BVN helps in the protection of customers' transaction, which is achieved through the prevention of illegal transaction, the safety of funds, and effective delivery of services. Also, BVN was established to play a significant role in protecting customers' bank account. BVN ensures the improvement of banks' security system, which helps in reducing/eliminating money laundry, scam, fraud, and impersonation that may be carried out on this account. These findings are supported by the studies of Bolton et al. (2018), which suggested that strengthening banks' security will enhance the protection of customers' data. Siyal et al. (2019) also discovered that the acceptance of mobile banking and improvement of customers' loyalty were determinants of security enhancement. Gupta and Mehta (2021) also discovered that fraudulent activities and customers' confidence are important issues in mobile transaction adoption.

Finally, it was revealed from findings that BVN effectively boosts customers' confidence. BVN prevents security breaches on customers' accounts by providing a special anti-fraud system and biometric security system, which helps promote customers' confidence and prevent bank and systemic failure in the banking system. The findings conformed to the empirical results of Nnachi et al. (2020), Odusina and Fowosire (2014), Wisdom (2015) whose findings revealed that BVN helps in the prevention of fraud reduce security breach and money laundering. Corradi, Montanari, and Stefanelli (2001) found mobile banking security to be an important issue in the acceptance of online banking and

influence customers' confidence. Joseph et al. (1999) discovered that protecting customers' data in online banking would promote customers' satisfaction.

CONCLUSION

The banking sector is germane to the growth and development of the economy. However, the banking sector cannot survive without the major stakeholders in the banking system. Thus, ensuring that customers' data and funds are well protected is a prerequisite to the banking sector's continuous survival and contribution of the sector to the economy. Thus, efforts have been channeled by commercial banks and regulatory authorities towards protecting the customers' information which recent initiatives being the adoption and implementation of BVNs.

Thus, this study investigated the effect of BVN on customers' protection in the Nigerian banking sector. Findings from the study indicated that BVN effectively protects customers' transactions and bank accounts and boosts customers' confidence in the banking system. These findings imply that BVNs through their biometric security and the anti-fraud system help in fraud, impersonation, and security breaches on customers' accounts. Therefore, it was concluded that the introduction and implementation of BVNs are effective and efficient in protecting customers' data and funds in the banking system. The study thus recommended that commercial banks in Nigeria implement mechanisms to ensure that all customers are enrolled on the BVN platform. A special department should be set up to closely monitor the account of customers to discern customers who have applied for BVN from those who have not. In conjunction with the regulatory authority, commercial banks should continue developing a strong security network and technology to strengthen banks' security systems further and protect customers' data and funds.

Contribution to Knowledge

BVN is a recent initiative introduced by the Central Bank of Nigeria to strengthen security in the Nigerian banking system. Thus, there are very few studies conducted in the research area, and these studies focused on the mode of design of BVN and how BVN prevents fraudulent activities in Nigeria. Studies were not conducted on the effects of BVNs on customers' protection in Nigeria. Thus, this study contributed to the existing literature by investigating the effect of bank verification on the protection of banks' customers, especially customers' accounts, transactions, and confidence.

Limitations and Future Research Direction

While analyzing the effects of BVNs on the protection of commercial banks' customers in Nigeria, some limitations were encountered. The study was limited to customers that have experience with BVNs ignoring the customers that have not been enrolled in the BVN system. Also, the study was limited to a few respondents who may not adequately reflect the situation of the Nigerian banking sector. Therefore, it is suggested that future studies should be conducted on comparative analysis of customers that have experience with BVNs and customers that do not have BVNs for robust findings. Furthermore, more respondents should be sampled for adequate findings on the situation of the Nigerian banking system.

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